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| APPLICATION NO.                                                       | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/613,720                                                            | 07/03/2003  | Lin Davis            | 15828-183001        | 4972             |
| 26231                                                                 | 7590        | 07/28/2006           | EXAMINER            |                  |
| FISH & RICHARDSON P.C.<br>P.O. BOX 1022<br>MINNEAPOLIS, MN 55440-1022 |             |                      | BLOUNT, ERIC        |                  |
|                                                                       |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                       |             |                      | 2612                |                  |

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/613,720

Applicant(s)

DAVIS, LIN

Examiner

Eric M. Blount

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-29 and 31-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7, 9-29, and 31-36 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-7, 9-29, and 31-36 are currently pending in the present application. Claims 8 and 30 are cancelled. Claims 1, 3, 13, 14, 18, 19, 21-23, 26, and 27 are amended.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 9-29, and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tatsuno [U.S. Patent No. 6191695] in view of Tatsuno [JP 57022947] in further view of Castleman [U.S. Patent No. 6518574]

As for **claim 1**, Tatsuno '695 teaches a fuel dispensing station comprising:

- a. A fuel dispenser (10),
- b. An ignition source detector (31), and
- c. A control unit (30).

### DETAILED ACTION

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The electromagnetic wave sensor taught by Tatsuno '695 is considered analogous to the ignition source detector claimed by applicant. It is well known in the art that it was believed at the time of the Tatsuno '695 invention, that mobile phones and other electromagnetic wave generating devices were capable of producing sparks and/or igniting fires (See [www.psc.ca/safety\\_info/safety\\_alerts/1999/sa99\\_18.htm](http://www.psc.ca/safety_info/safety_alerts/1999/sa99_18.htm), Canadian Petroleum Safety Council, Safety Alert #18). The electromagnetic wave sensor is for generating and transmitting a detection signal indicating the presence of an unwanted ignition source, wherein that source comprises electromagnetic waves (column 2, lines 40-58). Tatsuno '695 teaches a control unit which receives the detection signal and generates a control signal for output to the fuel dispenser, wherein the fuel dispenser responds by inhibiting the dispensing of fuel (column 2, lines 59-65 and column 4, lines 10-16). The ignition source detector may be located on the fuel dispenser (Figures 6 and 7) and the inhibiting of fuel from the dispenser may be independent of other fuel dispensers (column 6, lines 13-30 and line 59 – column 7, line 12). Tatsuno '695 does not specifically disclose that the electromagnetic wave detector directly detects an ignition source.

In an analogous art, Tatsuno '947 discloses a fuel dispensing station comprising at least one fuel dispenser and an ignition source detector operable to directly detect an ignition source. The ignition source detector taught in this reference is a fire sensor. It was well known in the art at the time of invention by the applicant that fire sensors are capable of directly detecting ignition sources. It would have been obvious to one of ordinary skill in the art that the detectors taught by both Tatsuno references are interchangeable as both send signals to inhibit the dispensing of fuel at a fuel pump upon the detection of an unwanted source at a fueling station.

Neither Tatsuno '695 nor Tatsuno '947 specifically disclose an ignition source detector operable to directly detect a spark or an ember. In an analogous art for fire detection, Castleman discloses a fire detector with multiple sensors. Castleman teaches an effective method and system for detecting sparks, flames, or fire with little or no interruptions caused by false alarms (column 4, lines 40-43; column 6, line 66- column 7, line 6; and column 8, line 22-28). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to modify the fire sensor in the invention of Tatsuno '695 as modified by Tatsuno '947 to include a fire detector with multiple sensors as taught by Castleman because the modification would result in a fuel dispensing station that was sensitive, reliable, inexpensive, and effective in directly detecting sparks, flames, or any ignition that may occur, with little or no interruptions caused by false alarms. Further, the modification would have resulted in a fuel dispensing station for inhibiting the dispensing of fuel upon early detection of a fire or ignition source. Detecting a spark directly would have allowed the system to respond before a full-fledged fire.

As for **claim 2**, Tatsuno '695 discloses a fuel-management unit and at least one communicator, wherein the fuel-management unit receives the detection signal output by the ignition source detector. The fuel-management unit outputs an information signal to inform users of unsafe conditions (column 2, lines 50-58). It is inherent that people are notified of the suspended fuel dispensers.

As for **claim 3**, the fuel dispenser includes a control unit therein, and the detection signals generated when the ignition source is detected is transmitted to the control unit via the fuel-management unit (Tatsuno '695, column 2, lines 59-65). Castleman discloses that a spark may be an ignition source.

As for **claims 4 and 5**, Tatsuno '695 teaches that the ignition source detector (electromagnetic wave sensor) may be provided in an area outside the fuel dispensing station where an ignition source would be well sensed, such as a canopy above the fueling station or in each of the fueling units (column 9, lines 40-49). This reasonably meets all of the limitations set forth by the claims.

As for **claims 6 and 7**, Tatsuno '695 teaches that the ignition source detector may be located outside of a fueling station in a location capable of detecting an unwanted ignition source or within a fueling station (column 2, lines 40-49). It is obvious that the ignition source could be located anywhere on, in, or around the fueling station that would provide the desired results. Location of the ignition source detector can be viewed as a matter of design choice.

As for **claims 8, 11, 15, 24, and 25**, Tatsuno '695 does not specifically disclose that the unwanted ignition source comprises a spark, an open flame, or embers. However, as noted above, it was known in the art at the time of the invention by applicant that electromagnetic devices are capable of producing sparks when in the vicinity of fueling stations. The use of these devices ultimately leads to fires or explosions. In Tatsuno '947 a fire sensor is used to detect unwanted ignition sources. It was well known in the art at the time of the invention by the applicant that fire sensors may comprise different types of detectors including IR flame detectors (please refer to patents cited on PTO-892). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to incorporate the fire sensor, including well known components as taught by Tatsuno '947 into the system because the incorporation of the fire sensor would result in a system more capable of detecting and preventing several types of fire hazards at a fuel station.

As for **claims 9, 10, and 12**, Tatsuno '695 discloses that the fuel dispenser temporarily suspends fuel supply in response to a control signal from the control unit. A communicator is provided for outputting a sound and/or light signal. The ignition source detector taught by Tatsuno '695 is an electromagnetic spectrum detector (column 2, line 40 – column 3, line 10).

As for **claim 13**, the claim is interpreted and rejected as stated above in the rejections of claims 1 and 2.

Regarding **claims 14 and 21**, Tatsuno '695 discloses a method of detecting an unwanted ignition source, communicating the detection of the ignition source to a customer or other personnel, and suspending the delivery of fuel in response to the detection of the ignition source (column 2, lines 25-58). Tatsuno '947 and Castleman disclose methods of directly detecting an ignition source (see claim 1). Castleman shows that an ignition source may include a spark.

As for **claims 16 and 17**, the claims are interpreted and rejected as stated above in the rejections of claims 9 and 10.

Regarding **claims 18, 19, 23, and 26**, disclosed is a step of detecting the absence of an ignition source, and resuming the delivery of fuel in reaction to the detection of the absence of an ignition source (Tatsuno '695 column 5, lines 24-37). Tatsuno '695 teaches a re-fuel switch that can be used by a customer or personnel to resume the dispensing of fuel. Tatsuno '695 does not specifically disclose that the resumption of fuel delivery automatically takes place in response to a non-detection signal. However, upon receiving a non-detection signal a user should use the re-fuel switch to resume fueling operations. It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant that re-fueling operations could be initiated automatically or manually. The automatic operation would be done to eliminate user error and



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provide a smoother transition back into the re-fueling operation. Castleman discloses that an ignition source may include a spark.

As for **claim 20**, it would have been obvious to one of ordinary skill in the art at the time of the invention that the re-fueling switch taught by Tatsuno '695 could be provided anywhere at a gas station. One might want the onsite personnel to control the re-fueling switch so that users located near the ignition source could not attempt to restart the re-fueling operation while an ignition source was still present.

As for **claim 22**, the aforementioned inventions disclose all of the limitations set forth by the claims. Please see claims above for a further explanation of the rejection.

As for **claim 27**, the cited references teach all of the limitations of the claim. Please see claim 1 above.

As for **claim 28**, Tatsuno '695 discloses a fuel-management unit and at least one communicator, wherein the fuel-management unit receives the detection signal output by the ignition source detector. The fuel-management unit outputs an information signal to inform users of unsafe conditions (column 2, lines 50-58). It is inherent that people are notified of the suspended fuel dispensers.

As for **claim 29**, the fuel dispenser includes a control unit therein, and the detection signals generated when the ignition source is detected is transmitted to the control unit via the fuel-management unit (Tatsuno '695, column 2, lines 59-65).

As for **claims 30 and 31**, Tatsuno '695 teaches that the ignition source detector (electromagnetic wave sensor) may be provided in an area outside the fuel dispensing station where an ignition source would be well sensed, such as a canopy above the fueling station or in

each of the fueling units (column 9, lines 40-49). This reasonably meets all of the limitations set forth by the claims.

As for **claims 32 and 33**, Tatsuno '695 teaches that the ignition source detector may be located outside of a fueling station in a location capable of detecting an unwanted ignition source or within a fueling station (column 2, lines 40-49). It is obvious that the ignition source could be located anywhere on, in, or around the fueling station that would provide the desired results. Location of the ignition source detector can be viewed as a matter of design choice.

As for **claims 34, 35, and 36**, Tatsuno '695 discloses that the fuel dispenser temporarily suspends fuel supply in response to a control signal from the control unit. A communicator is provided for outputting a sound and/or light signal. The ignition source detector taught by Tatsuno '695 is an electromagnetic spectrum detector (column 2, line 40 – column 3, line 10).

### *Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M. Blount whose telephone number is (571) 272-2973. The examiner can normally be reached on Monday-Thursday 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



THOMAS MULLEN  
PRIMARY EXAMINER  
AU 2612

Eric M. Blount  
Examiner  
Art Unit 2612

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7/24/06